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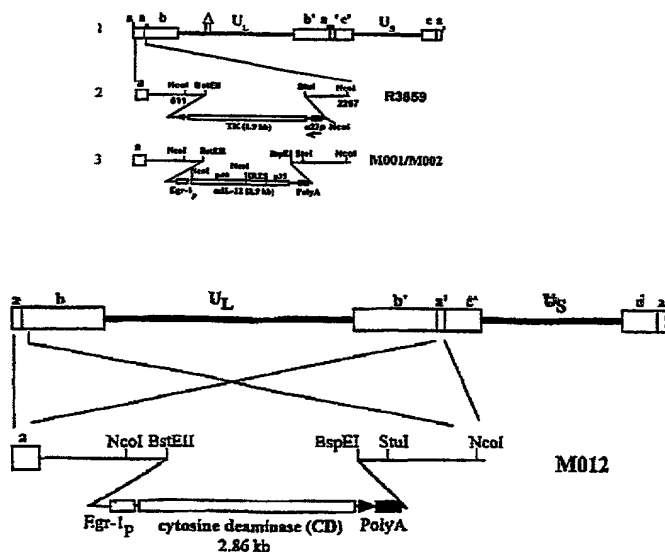
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- (71) Applicant (for all designated States except US): UAB RESEARCH FOUNDATION [US/US]; AB1120G, 1530 3rd Avenue South, Birmingham, AL 35294-0111 (US).
- (72) Inventors; and  
(75) Inventors/Applicants (for US only): WHITLEY, Richard, J. [US/US]; 216 Shades Crest Circle, Birmingham, AL 35216 (US). MARKERT, James, MacDowell [US/US]; 4416 Clairmont Avenue, Birmingham, AL 35222 (US). GILLESPIE, George, Yancey [US/US]; 4149 Cliff Road, Birmingham, AL 35222 (US). PARKER, Jacqueline, Ness [US/US]; 2317 Misty Ridge Circle, Birmingham, AL 35226 (US).
- (74) Agents: COGEN, Ellen, S. et al.; Gifford, Krass, Groh, Sprinkle, Anderson & Citowski, P.C., Suite 400, 280 N. Old Woodward Avenue, Birmingham, MI 48009 (US).
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(54) Title: HERPES SIMPLEX VIRUS EXPRESSING FOREIGN GENES AND METHOD FOR TREATING CANCERS THEREWITH



(57) Abstract: An anti-cancer pharmaceutical composition includes a herpes simplex virus (HSV) vector into which a nucleic acid sequence encoding for an anti-cancer agent selected from interleukin-12, GM-CSF, and CD has been inserted. A method of treatment of a patient suffering from cancer includes administering to the patient the anti-tumor pharmaceutical composition including an HSV vector having a nucleic acid sequence encoding for an anti-cancer agent selected from interleukin-12, GM-CSF, and CD inserted therein.

Both copies of the  $\gamma_1 34.5$  gene (located within the inverted repeat sequences a, a') have been replaced with the CD insert. The background is HSV-1 "F" strain. The CD insert was obtained from the vector pCD2, obtained from the American Type Culture Collection (ATCC), catalog number 40999.

References for CD insert:

Biotechniques 7: 980-990, 1989  
U.S. Pat. 5,358,866 October 25, 1994

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